Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

**Unit 8 Notes, Part 2: Classification of Organisms**

Ms. Ottolini, PreAP Biology

1. Classification involves putting organisms into groups based on their \_\_\_\_\_\_\_\_\_\_\_\_\_\_, traditionally using comparative anatomy.
2. Compare / contrast the three different types of structures studied in comparative anatomy:

A. Homologous structures:

B. Analogous structures:

C. Vestigial structures:

1. The technical term for the science of classifying organisms is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The first scientist to use the modern system of taxonomy was \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. He is known as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. Linnaeus developed a naming system using the following:

A. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B. Based groupings on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ differences between organisms

C. Divided organisms into two groups: \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_.

1. Today, scientists use Linnaeus’s system for naming organisms, which is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

In this system, an organism receives two names, a \_\_\_\_\_\_\_\_\_\_\_\_\_ name and a \_\_\_\_\_\_\_\_\_\_\_\_\_ name.

1. When writing an organism’s scientific name, both words must be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The genus is always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the species is always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Examples:

1. Why are scientific names always written in Latin?
2. A genus is defined as a group of similar species. How do we define a species?
3. Genus and species are Linnaeus’s two most specific “levels of relatedness” or “hierarchies.” List all Linnaeus’s levels from the most general / inclusive to most specific / exclusive.

What is a memory trick for remembering all of these levels?

1. What are two modern additions to Linnaeus’s system?

A.

B.